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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/882,540	06/15/2001	Frido Garritsen	3935P012	8278

7590 12/11/2006

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EXAMINER

CAO, CHUN

ART UNIT PAPER NUMBER

2115

DATE MAILED: 12/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/882,540

**Applicant(s)**

GARRITSEN ET AL.

**Examiner**

Chun Cao

**Art Unit**

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### FINAL REJECTION

1. Claims 1, 3-18 and 20-36 are presented for examination. Claims 2 and 19 were canceled.
2. The text of those applicable section of Title 35, U.S. Code not included in this action can be found in the prior Office Action.
3. The rejections are respectfully maintained to the extended that is applicable to the amended claims and reproduced infra for applicant's convenience.
4. Claims 1, 3, 8-11, 13-15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parrish (Parrish), U.S. patent no. 6,704,879 in view of George et al. (George), U.S. Patent No. 6,785,829 and Millman et al. (Millman)<sup>1</sup>, U.S. patent no. 6,476,800.

As per claim 1, Parrish teaches a method of managing power in a graphics controller [col. 1, lines 35-37], comprising:

receiving a change indication related to a system power supply [col. 2, lines 17-21, 49-50];

adjusting a first clock [col. 2, lines 49-50];

adjusting a graphics controller power supply voltage level [col. 2, lines 27-45, 60-65; col. 3, lines 16-18; emphasis added, "power consumption by the graphics controller is proportional to the clock frequency"]; and

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<sup>1</sup> Millman is a prior art reference cited prior office action.

informing by the graphics controller a VGA BIOS with an indication of a change related to the system power supply, wherein the informing includes requesting a set of one or more available clock rates [col. 2, line 58-col. 3, line 7; col. 4, lines 31-36].

Parrish does not explicitly teach that the first clock includes a video clock for a display, a set of one or more preprogrammed available clock rates stored in the VGA BIOS, and adjusting through a voltage regulator, a graphics controller power supply voltage level in response to the receiving of the change indication related to the system power supply.

Millman teaches of managing power in a graphics controller to adjust a clock wherein the clock includes a video clock for a display [col. 5, lines 4-21, 32-60; fig. 2], and storing a set of one or more preprogrammed available clock rates in the VGA BIOS [col. 4, lines 12-41; col. 5, lines 32-36].

George teaches of adjusting through a voltage regulator [240, fig. 2], a graphics controller [367, fig. 3] power supply voltage level in response to the receiving of the change indication related to the system power supply [figures 2, 3; col. 4, lines 16-22; col. 5, lines 28-47].

It would have been obvious to one of ordinary skill in the art to combine the teachings of Parrish and George and Millman because they teach of managing power for a graphics controller, and the specific teaching of George would improve the power consumption of Parris' system by adjusting supply voltage via a voltage controller; and the specific teaching of Millman would allow an adjusted clock applied to a display in order to further improve power consumption of Parris system.

As per claim 3, Parrish teaches the method further comprises:

receiving the set of one or more available clock rates; checking a state of the graphics controller; choosing a desired clock rate from the set of available clock rates; adjusting a second clock to conform to the desired clock rate [col. 3, lines 1-18]; and wherein:

adjusting the first clock comprises reducing a rate of the first clock; and adjusting the graphics controller power supply voltage level comprises reducing the graphics controller power supply voltage [col. 2, line 58-col. 3, line 18].

As per claim 8, Parrish teaches that the graphics controller power supply voltage level is associated with a graphics controller power supply internal to the graphics controller [fig. 1; col. 2, lines 58-65].

As per claim 9, Parrish teaches that the graphics controller power supply voltage level is associated with a controller power supply external to the graphics controller, and adjusting the graphics controller power supply voltage level includes programming the graphics controller power supply with a signal [fig. 1; col. 2, line 58 –65].

As per claim 10, Parrish teaches of adjusting the first clock comprises increasing a rate of the first clock; and adjusting the graphics controller power supply voltage level comprises increasing the graphics controller power supply voltage level [col. 2, lines 38-45, 58 –65].

As per claim 11, Parrish teaches of increasing a clock rate of a second clock [col. 2, lines 38-45].

As per claim 13, Parrish teaches of detecting a change related to a system power supply [col. 2, lines 58-65].

As per claim 14, Parrish teaches of installing a software routine [BIOS routines] in a system containing the graphics controller, the software routine suitable for detecting the change related to the system power supply [col. 1, lines 40-43; col. 2, line 48-65].

As per claim 15 is written in means plus function and contained the same limitations as claims 1 and 3, therefore same rejection is applied.

As per claim 18, Parrish teaches of receiving a software routine suitable for notifying the graphics controller; wherein, notifying the graphics controller comprises executing the software routine [col. 1, lines 40-43; col. 2, line 48-65].

5. Claims 4, 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parrish (Parrish), U.S. patent no. 6,704,879 in view of George et al. (George), US Patent No. 6,785,829 and Millman et al. (Millman), U.S. patent no. 6,476,800 and Dunki-Jacobs et al. (Jacobs), U.S. patent no. 5,349,525.

As per claim 4, Parrish and George and Millman do not explicitly teach of disabling a CLUT.

However, Jacobs teaches of disabling a CLUT [col. 14, lines 27-42].

It would have been obvious to one of ordinary skill in the art at time the invention combine the teachings of Parrish and George and Jacobs. Jacobs states above would increase the power consumption of Parrish's system by disabling a CLUT.

Art Unit: 2115

As per claim 5, Jacobs teaches of disabling the CLUT [col. 14, lines 27-42]; and Parrish teaches of checking the state of the graphics controller [col. 3, lines 58-65].

As per claim 12, Jacobs teaches of enabling a CLUT [col. 14, lines 27-42].

6. Claims 6, 7, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parrish (Parrish), U.S. patent no. 6,704,879 in view of George et al. (George), US Patent No. 6,785,829 and Millman et al. (Millman), U.S. patent no. 6,476,800 and Powell (Powell), US Pat No. 6,618,042.

As to claims 6 and 16-17, Parrish and George and Millman do not explicitly teach notifying a system to reduce brightness of display.

Powell teaches notifying a system to reduce brightness of display [col. 4, lines 1-8].

It would have been obvious to one of ordinary skill in the art to modify the teachings of Parrish and George and Powell to notify a system to reducing brightness of a display in order to conserve power.

As per claim 7, Parrish inherently teaches notifying a system comprises notifying a chipset directly [fig. 1; col. 2, lines 58-63].

7. Claims 20-22 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parrish (Parrish), U.S. patent no. 6,704,879 in view of George et al. (George), US Patent No. 6,785,829 and Millman et al. (Millman), U.S. patent no. 6,476,800 and Suboh (Suboh), US Patent No. 5,524,249.

As per claim 20, Parrish does not explicitly teach disabling a first portion of circuitry responsive to checking the state of the graphics controller.

Suboh teaches disabling a first portion of circuitry responsive to checking the state of the graphics controller [col. 4, lines 20-32, 46-48. The PCLK is viewed as a first portion of the circuitry].

It would have been obvious to one of ordinary skill in the art to combine the teachings of Parrish and George and Suboh to disable a first portion of circuitry in response to a state of reduced power of a graphics controller in order to conserve power that may be consumed by an enabled portion of circuitry.

As per claim 21, Suboh further teaches disabling a first portion of the circuitry responsive to checking the state of the graphics controller [col. 4, lines 20-32, col. 4 lines 46-48].

As per claim 22, Suboh further teaches enabling the first portion of the graphics controller [col. 8, lines 24-27].

As per claim 36 is written in means plus function and contained the same limitations as claims 1, 3 and 20, therefore same rejection is applied.

8. Claims 23-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parrish (Parrish), U.S. patent no. 6,704,879 in view of George et al. (George), US Patent No. 6,785,829, Millman et al. (Millman), U.S. patent no. 6,476,800, Powell (Powell), US Pat No. 6,618,042, Dunki-Jacobs et al. (Jacobs), U.S. patent no. 5,349,525 and Suboh (Suboh), US Patent No. 5,524,249.

As to claims 23-35 basically are the corresponding elements that are carried out the method of operating step in claims 1 and 3-22. Accordingly, claims 23-35 are rejected for the same reason as set forth for claims 1 and 3-22.



***Response to Arguments***

10. Applicant's arguments filed on 11/13/06, which have been fully considered but they are not persuasive.

11. In the remarks, Applicants argued that 1) Parrish and George and Millman fail to teach, disclose or suggest a limitation of "a set of one or more preprogrammed available clock rates stored in the VGA BIOS".

12. The examiner respectfully traverses the argument for the following reasons:

As to point 1): Millman teaches of storing a set of one or more preprogrammed available clock rates in the VGA BIOS [col. 4, lines 12-41; col. 5, lines 32-36].

Also see detailed rejection indicated above.

13. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

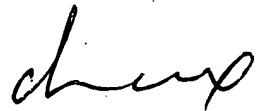
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun Cao whose telephone number is 571-272-3664. The examiner can normally be reached on Monday-Friday from 7:30 am-4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dec. 8, 2006

**CHUN CAO  
PRIMARY EXAMINER**